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10/790,081	03/02/2004	Seong-Bong Kim	6192.0358.US	2543

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EXAMINER

LAMB, BRENDA A

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/790,081

Applicant(s)

KIM ET AL.

Examiner

Brenda A. Lamb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 and 30-33 is/are allowed.
- 6) ☒ Claim(s) 1-26, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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Claim 28-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following terms in claim 28 lack proper antecedent basis: at line 1 "the detector" and at line 4 "the remover".

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 and 18-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Schultz et al 6,695,923.

Schultz et al '923 teaches as shown in Figure 1B through Figure 6 a discharging unit for discharging a liquid coating material comprising: a body having a first face facing a substrate, the substrate including a plurality of coating areas on which a liquid coating material is coated; at least an inlet portion disposed on a portion of the body, the liquid coating material being provided into the body through the inlet portion; and at least an outlet portion disposed on the first face of the body, the outlet portion rendering the liquid coating material discharge onto the coating area. Thus every structural element of claim 1 is taught by Schultz et al '923. Schultz et al '923 is capable of applying a photosensitive material onto the substrate since it teaches every claimed structural element of the apparatus. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). With respect to claim 18, the same rejection applied to claim 1 is applied here. Schultz et al '923 teaches a supporting unit 105 supporting a substrate, supplying unit 12 supplying the coating and transferring unit 104,102 transferring the discharging unit relative to the support. Thus

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every structural element of claim 1 is taught by Schultz et al '923. Schultz et al '923 is capable of applying a photosensitive material onto the substrate since it teaches every claimed structural element of the apparatus. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). With respect to claims 2 and 19, Schultz et al '923 teaches the discharging unit is further comprising an outlet divider, the outlet divider dividing the outlet portion into a plurality of sub-outlets 30 for controlling a stream direction of the liquid coating material, so that the liquid coating material is only discharged toward the coating area. With respect to claims 3 and 20, Schultz et al '923 teaches the body includes a containing space to contain the liquid coating material therein, the inlet portion being disposed on a second face of the body opposite to the first face. With respect to claims 4 and 21, Schultz et al '923 shows in Figure 4 that the body includes containing space, and has a slit shape having a length longer than a width thereof. With respect to claims 5 and 22, Schultz et al '923 shows in Figure 4 outlet portion has a length and such a length is capable of being identical to the width of the coating area dependent on dimensions of the substrate being coated.

Claims 1-5, 7-22 and 24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Schultz et al 2003/0131791.

Schultz et al '791 teaches the design of a coater for coating a liquid coating layer on a substrate comprising: a supporting unit 36 supporting a mother substrate having a plurality of unit substrates on which a liquid coating is coated; a discharging unit as shown in Figures 12-14 for discharging the liquid coating onto the substrate, the discharging unit including a) a plurality of bodies having a first face facing the mother substrate, an inlet portion disposed on a portion of each body, the liquid coating being provided into the body through the inlet portion and an outlet portion disposed on a first face of each of the bodies, the liquid coating being discharged onto the unit substrate through the outlet portion and the combining part or spacer block combining the bodies each to each other; and transferring unit 104,102 transferring the discharging unit relative to the support. Schultz et al '791 is capable of applying a photosensitive material onto the substrate since it teaches every claimed structural element of the apparatus. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Thus Schultz et al '791 teaches every positively claimed structural element of the apparatus as set forth in claims 1, 10, 14 and 18. With respect to claims 2, and 19, Schultz et al '791 teaches the discharging unit is further comprising an outlet divider, the outlet divider dividing the outlet portion into a plurality of sub-outlets as shown in Figure 13 for controlling a stream direction of

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the liquid coating material, so that the liquid coating material is only discharged toward the coating area. With respect to claims 3, 11, 15 and 20, Schultz et al '791 teaches the body includes a containing space to contain the liquid coating material therein, the inlet portion being disposed on a second face of the body opposite to the first face. With respect to claims 4, 12, 16 and 21, Schultz et al '791 shows in Figure 4 that the body includes containing space, and has a slit shape having a length longer than a width thereof. With respect to claims 5, 13, 17 and 22, Schultz et al '791 shows in Figure 4 outlet portion has a length and such a length is capable of being identical to the width of the coating area dependent on dimensions of the substrate being coated. With respect to claims 7-9 and 24-26, Schultz et al '791 applicator as depicted in Figure 13 shows coating applicators are connected together so as to act as a unit or body. The Schultz et al '791 body has containing spaces to individually contain the liquid coating material therein, the inlet portion being disposed on a second face individually corresponding to each of the containing spaces, for thereby individually providing the liquid coating material into the plurality of containing spaces, and the outlet portion being disposed individually corresponding to each of the containing space, for thereby individually discharging the liquid coating material from each of the containing spaces. The Schultz et al '791 outlet portion has a slit shape having a length longer than a width thereof and length of the outlet portion is identical to a width of the coating area dependent on dimensions of the substrate being coated.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Columbus et al.

Columbus et al teaches the design of an apparatus and method teaches as shown in Figures 6-13 a discharging unit for discharging a liquid coating material comprising: a body having a first face facing a substrate, the substrate including a plurality of coating areas on which a liquid coating material is coated; at least an inlet portion disposed on a portion of the body, the liquid coating material being provided into the body through the inlet portion; and at least an outlet portion disposed on the first face of the body, the outlet portion rendering the liquid coating material discharge onto the coating area. Thus every structural element of claim 1 is taught by Columbus et al. Columbus et al is capable of applying a photosensitive material onto the substrate since it teaches every claimed structural element of the apparatus. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). With respect to claim 2, Columbus et al teaches the discharging unit is further comprising an outlet divider, the outlet divider dividing the outlet portion into a plurality of sub-outlets for controlling a stream direction of the liquid coating material, so that the liquid coating material is only discharged toward the coating area. With respect to claim 3, Columbus et al teaches the body includes a containing space to contain the liquid coating material therein, the inlet portion being disposed on a second face of the body opposite to the first face. With respect to claims 4 and 6, Columbus et al shows in



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Figures 6-13 that the body includes containing space, and has a slit shape having a length longer than a width thereof. Columbus et al shows in Figures 6-13 that the outlet divider is protruded from the first face of the body and into the containing space. With respect to claim 5, Schultz et al shows in Figures 6-13 that the outlet portion has a length and such a length is capable of being identical to the width of the coating area dependent on dimensions of the substrate being coated.

Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Columbus et al in view of Schultz et al 6,695,923.

Columbus et al is applied for the reasons noted above. Columbus et al teaches a supplying unit 23 for supplying a liquid coating material to the discharging unit. Columbus et al fails to teach a transferring unit for transferring the discharging unit relative to the support and a support unit for supporting a plurality of unit substrates. However, it would have been obvious to modify the Columbus et al by providing a support unit for the substrates and transferring unit such as taught by Schultz et al '923 for the obvious advantage of greater control of the coating process. With respect to claim 19, Columbus et al teaches the discharging unit is further comprising an outlet divider, the outlet divider dividing the outlet portion into a plurality of sub-outlets for controlling a stream direction of the liquid coating material, so that the liquid coating material is only discharged toward the coating area. With respect to claim 20, Columbus et al teaches the body includes a containing space to contain the liquid coating material therein, the inlet portion being disposed on a second face of the body opposite to the first face. With respect to claims 21 and 23, Columbus et al shows in Figures 6-13 that

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the body includes containing space, and has a slit shape having a length longer than a width thereof. Columbus et al shows in Figures 6-13 that the outlet divider is protruded from the first face of the body and into the containing space. With respect to claim 22, Columbus et al shows in Figures 9 and 13 that the outlet portion has a length and such a length is capable of being identical to the width of the coating area dependent on dimensions of the substrate being coated.

Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Rochman et al 5,683,037.

Rochman et al teaches a discharging unit for discharging a liquid coating material comprising: a plurality of bodies (elements 18A and 18B), each of the bodies having a first face facing a substrate, the substrate including a plurality of coating areas on which a liquid coating material is coated; an inlet portion disposed on a portion of each of the bodies, the liquid coating material being provided into each of the bodies through the inlet portion; an outlet portion disposed on the first face of each of the bodies, the outlet portion rendering the liquid coating material discharge onto the coating area; and at least a spacer block, the spacer block which includes 14 and 16 combining the bodies each other, so that the plurality of the bodies operates together with each other. Thus every structural element of the claimed apparatus as set forth in claims 1 and 10 is taught by Rochman et al. Rochman et al is capable of applying a photosensitive material to the substrate since it teaches every claimed structural element of the apparatus. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed

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apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

Claims 28-29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 27 and 30-32 are allowed.

The prior art fails to teach or suggest an apparatus for coating a photosensitive layer on a substrate, comprising: a support supporting a substrate having a plurality of unit substrate on which a photosensitive material is coated; a coater including a discharging unit for discharging the photosensitive material onto the unit substrate and a transfer unit for moving the discharging unit along a surface of the substrate, the coater coating the photosensitive layer on the substrate by the unit substrate; a detector disposed in front of the coater, the detector detecting foreign matters on the surface of the substrate; a remover removing the foreign matters detected by the detector; and a controller controlling the coater, the detector, and the remover.

Any inquiry concerning this communication should be directed to Brenda A. Lamb at telephone number (571) 272-1231. The examiner can normally be reached on Monday and Wednesday thru Friday with alternate Tuesdays off.



Brenda A Lamb  
Examiner  
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